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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,883	03/29/2006	Jani Hamalainen	2657-000003/US	9704

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HARNESS, DICKEY & PIERCE, P.L.C.
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EXAMINER

PATEL, DEVANG R

ART UNIT	PAPER NUMBER
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1793

MAIL DATE	DELIVERY MODE
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07/30/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/533,883	Applicant(s) HAMALAINEN ET AL.	
	Examiner DEVANG PATEL	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/13/09 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gormon et al. (US 3248515, of record) in view of DE 29605891 U1 (referring as DE '891), and further in view of Ren (US 6086970, of record).

a. **Regarding claim 1, Gormon et al. ("Gormon")** discloses a filler wire guide tube, a base material of the guide tube being plastic, including an inner layer region 14 and an outer metal layer region 16 (casing) [col. 4, lines 49-75]. Gormon does not disclose an additive. Therefore, Gorman does teach the outer layer region 16 is not blended with an additive, but fails to teach the inner layer

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region 14 is blended with an additive. However, it is known to provide such a PTFE additive in the inner region of wire guide tube. **DE '891** discloses a plastic guide hose (matrix of polymers) for welding wire or cable cores. DE '891 discloses treating the interior of the guide hose with PTFE and/or molybdenum sulfide, and/or graphite in order to reduce sliding resistance (abstract). DE '891 is silent as to **blending** the PTFE material in the interior region. **Ren** (drawn to lubricious surface extruded tubes) discloses blending lubricating PTFE particles prior to extruding a tube, and such tube has an improved lubricity and collapse strength (abstract; col. 2, lines 20-30; col. 3, lines 1-7). Ren also provides external lubricant comprising PTFE particles to further enhance the lubricity to reduce friction of a guide wire within a lumen of tube (col. 4, lines 12-52). Ren is an analogous art since Ren is concerned with a tube composition providing a strong yet lubricious tube for a guide wire, medical catheters being an intended application [col. 1, lines 7-9]. In view of collective disclosures of Gormon, DE '891 and Ren, it would have been obvious to a person of ordinary skill in the art at the time of the invention to form the inner plastic tubing layer of Gormon by blending lubricating PTFE particles because doing so would reduce feeding resistance (DE '891- abstract) and provide an enhanced lubricity and collapse strength to the guide tube (Ren - abstract; col. 4, lines 45-52).

b. **As to claim 2**, Ren further discloses the use of hard particles such as silica, mica, glass bead, talc, and molybdenum disulfide in combination with polymers to reduce the sliding friction of the two surfaces (col. 3, lines 30-37).

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Silica (silicon dioxide) particles are taken to be embraced by particulate silicon, since it does not positively require the silicon to be an element as opposed to be compound. Ren further states: *"The addition of hard particles in combination with a lubricating solid, such as PTFE, improves lubricity over either compound added alone"* (col. 3, line 45). It would have been obvious to a person of ordinary skill in the art at the time of the invention to form the inner plastic liner of Gormon using silica particles of Ren in order to improve the lubricity compared to adding PTFE alone [col. 3, lines 43-48].

c. **As to claim 3**, Ren discloses "PA compound 9" with lubricant composition of 3% PTFE and 5% of silica (Table 1). Absent any showing of unexpected result, the recited composition would have been obvious to an artisan of ordinary skill at the time of the invention in making the modified plastic tubing of Gormon, because one would have determined, by routine experimentation, appropriate amounts in order to form resultant tubing having the desired characteristics of having an enhanced lubricity and collapse strength.

d. **As to claim 4**, Gormon discloses the thickness of inner layer being about the same as the wire diameter [col. 6, lines 35-37], which is 0.02" - about 500 micron. Moreover, it would have been obvious to an artisan of ordinary skill at the time of invention to choose the instantly claimed range (0.2 mm-0.5 mm) for the intended purpose of guiding a filler wire through process optimization, since it has been held that where the general conditions of a claim are disclosed in the

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prior art, discovering the optimum or workable ranges involves only routine skill in the art [MPEP 2144.05].

e. **As to claim 5**, Ren discloses that it is known in the art to make the guide wire tubes out of HDPE [col. 1, line 40]. In view of that, it would have been obvious to a person of ordinary skill in the art at the time of the invention to form the base material in the tube of Gormon out of HDPE since such is well-known in the art of guide tubes.

f. **As to claim 6**, Gormon teaches guide wire tube having an inner diameter of 0.052" (1.3 mm; column 5), which meets the limitation of an inner diameter of about 2-4 mm. As for an outer diameter, Gormon discloses spacer rings 24 of a diameter much greater than that of a wire- which could be 0.125"- 3.17 mm [col. 5, lines 34-36]. The casing (i.e. outer layer) is naturally of a larger diameter than the spacer rings [fig. 8]- greater than 3.17 mm, and thus, it meets the limitation of an outer diameter of about 4-7 mm. Moreover, it would have been obvious for an artisan of ordinary skill at the time of invention to choose the instantly claimed range of inner and outer diameter for the intended purpose of guiding a filler wire through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art [MPEP 2144.05].

g. **As to claim 7**, both DE '891 and Ren disclose the particulate composition including molybdenum sulfide.

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h. **Regarding claim 8, Gormon** discloses a filler wire guide tube, a base material of the guide tube being plastic, including an inner layer region 14 and an outer metal layer region 16 (casing) [col. 4, lines 49-75]. Gormon discloses that the outer layer 16 is not blended with the additive, but does not teach inner region blended with particulate additive of PTFE. However, it is known to provide such an additive in the inner region of wire guide tube. **DE '891** discloses a plastic guide hose (matrix of polymers) for welding wire or cable cores. DE '891 discloses treating the interior of the guide hose with PTFE and/or molybdenum sulfide, and/or graphite in order to reduce sliding resistance (abstract). DE '391 is silent as to blending the PTFE material in the interior region. **Ren** (drawn to lubricious surface extruded tubes) discloses blending lubricating PTFE particles prior to extruding a tube, such tube has an improved lubricity and collapse strength (abstract; col. 2, lines 20-30; col. 3, lines 1-7). Ren also provides external lubricant comprising PTFE particles to further enhance the lubricity to reduce friction of a guide wire within a lumen of tube (col. 4, lines 12-52). Ren is an analogous art since Ren is concerned with a tube composition providing a strong yet lubricious tube for a guide wire, medical catheters being an intended application [col. 1, lines 7-9]. In view of collective disclosures of Gormon, DE '891 and Ren, it would have been obvious to a person of ordinary skill in the art at the time of the invention to form the inner plastic tubing layer of Gormon by blending lubricating PTFE particles because doing so would reduce feeding resistance (DE '891- abstract) and provide an enhanced lubricity and collapse strength to

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the guide tube (Ren - abstract; col. 4, lines 45-52). The presence of blended PTFE in the modified inner layer of Gormon inherently reduces accumulation of debris and fouling and an outer metal layer of Gormon provides structural stiffness.

Response to Amendment and Arguments

Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments against the Inoue reference are moot in light of the new rejection set forth above.

Applicant argues that Ren reference explicitly teaches that lubricant is formed over the external surface of the tube. In response, Examiner contends that in addition to external lubricant, Ren also teaches lubricant in the inner layer of the guide tube. Ren discloses blending lubricating material such as PTFE powder into a mixture, prior to extrusion of the guide tube (col. 2, lines 20-30; col. 3, lines 1-5). Thus, the lubricant is formed in inner region of the tube. Moreover, Ren is merely applied to show that it is known to blend lubricating PTFE particles in making guide tubes; DE '891 discloses the known technique of applying PTFE lubricant to the inner region of the welding wire guide tube in order to reduce resistance.

Applicant also argues that one skilled in the art would not look to Ren (field of medical catheters) to combine with Gormon (field of welding wire). In response to applicant's argument that Ren is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be

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reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. In this case, Ren is an analogous art since Ren is concerned with a tube composition providing a strong yet lubricious tube for a guide wire, medical catheters being an intended application [col. 1, lines 7-9].

Conclusion

Claims 1-8 are rejected.

The rejections above rely on the references for all the teachings expressed in the text of the references and/or one of ordinary skill in the art would have reasonably understood from the texts. Only specific portions of the texts have been pointed out to emphasize certain aspects of the prior art, however, each reference as a whole should be reviewed in responding to the rejection, since other sections of the same reference and/or various combinations of the cited references may be relied on in future rejections in view of amendments.

Applicant is reminded to specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. 1.121; 37 C.F.R. Part 41.37; and MPEP 714.02.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEVANG PATEL whose telephone number is (571)270-3636. The examiner can normally be reached on Monday thru Thursday, 8:00 am to 5:30 pm, EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica Ward can be reached on 571-272-1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Devang Patel/
Examiner, Art Unit 1793

/Jessica L. Ward/
Supervisory Patent Examiner, Art Unit 1793